

# Supported Formats

Supported file formats and geographic projections

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At present, the ioapiTools support reading from and writing to IOAPI and CF files. In particular, the variables in these files need to include all four dimensions (time, layer, row or latitude, and col or longitude). For example, the tools can access any of the cctm files produced by CMAQ, but they will fail on reading boundary files. In future versions, the tools will support reading ioapi files with three-dimensional variables.

I use the term CF files to refer to netCDF files that attempt to hold to the standards of the netCDF Climate and Forecast metadata conventions:

<http://www.cgd.ucar.edu/cms/eaton/cf-metadata/index.html>

In addition, these CF files have two essential variables. The first is a grid-mapping variable named after the specific geographic projection. The grid-mapping variable contains all the projection information. The second variable is "ioapi\_meta." This ancillary variable retains all the additional metadata necessary to reconstruct the original ioapi file.

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The following geographic projections are presently supported by the tools:

- *Lambert Conformal Conic*

Additional projections can be added with only minor changes to the ioapiTools module. Contact the author if you want to add new projections.

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